Rising Above

The Mesa Court Towers are a hub of student activity at twilight. Opened in 2016, the three six-story residential buildings feature sustainable design and shared amenities ranging from flexible classroom and study spaces to a recreation center. The complex was named 2017 Project of the Year by the Design-Build Institute of America, which cited its “learn to live” environment and “understanding that learning does not stop after students leave the lecture hall.”
In this edition of UCI Magazine, “Gateway to Invention,” we feature the campus’s entrepreneurial spirit and culture of innovation. Our cover story, “Ingenuity Central” (page 14), details how UCI Applied Innovation assists entrepreneurs in creating startups and products that benefit society, while “Inventing a Better Future” (page 22) showcases a variety of designs, devices and discoveries by faculty, students and alumni. In “Enterprising Undergraduates” (page 30), you’ll learn how the ANTrepreneur Center motivates and equips students to launch ventures long before they graduate. And finally, “A Special Force” (page 36) introduces an alumnus whose life-changing injuries led him to establish the Green Beret Foundation to help his fellow veterans.

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On the Cover: “Gateway to Invention,” by Stephen Swintek
Evidence suggests that we overprescribe medications. About 70 percent of Americans are on prescription medications (Mayo, 2013). And 13 percent of Americans – including a quarter of women between 50 and 64 – are on antidepressants. Our pain management procedures have created a national epidemic. The problems with our healthcare system are reflected in national rankings: We have the world’s most expensive healthcare system, but U.S. healthcare quality ranks somewhere in the 20s. Integrative approaches to medicine make healthcare less about combating disease and more about creating and maintaining healthy systems.

Amidst Frank Yi
Yao Ngye

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All That Jazz

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Fall 2018 Applications Snapshot

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Shauhin Talesh, professor of law

UCI Chancellor Howard Gillman was named co-chair of the advisory board for the University of California’s new National Center for Free Speech and Civic Engagement in October. He shares the appointment with Erwin Chemerinsky, former dean of the UCI School of Law. The advisory board also includes former U.S. Sen. Barbara Boxer, former U.S. Secretary of Education John King Jr., Anne Kornblut, Facebook’s director of strategic communications; UCLA law student Avi Oved, New York Times columnist Bret Stephens, and Geoffrey R. Stone, a professor at the University of Chicago Law School. The UC National Center for Free Speech and Civic Engagement will explore how the fundamental democratic principles of free speech and civic engagement must adapt to the challenges and opportunities of modern society. Said Gillman, who co-authored the book Free Speech: Protecting the Principles of Democratic Freedom as a journalist and columnist. “The creation of this center comes at a critical time not only for higher education, but for our country as a whole.”

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“For me, there is no doubt that this event is not part of a natural cycle. The Larsen C ice shelf will not collapse for another few decades, most likely, but this calving is unique in the history of the ice shelf since first seen by human eyes by the Norwegian explorers Carl Anton Larsen in 1893.”

Eric Rignot, Donald Bren Professor of Earth System Science and senior research scientist at NASA’s Jet Propulsion Laboratory

The Washington Post
Nov. 15, 2017

New Dean Is Only Woman of Color Leading a Top 30 U.S. Law School

Distinguished legal scholar and teacher L. Song Richardson took the helm as dean of the UCI School of Law in January – becoming the only woman of color to serve in this role among U.S. News & World Report’s top 30 law schools. Richardson, who also acted as interim dean, was chosen after a nationwide search following the May departure of founding dean Erwin Chemerinsky. She has been a member of UCI’s law school faculty since 2014, with a joint appointment in criminology, law & society. Richardson previously held law professorships at DePaul University, American University and the University of Iowa. In addition, she has worked as a state and federal public defender in Seattle and was an assistant counsel at the NAACP Legal Defense and Educational Fund. Said Richardson: “I am passionate about redefining, reinventing and reimagining the future of legal education with the faculty, students and dedicated supporters of UCI Law.”

Legal Voice Appointed for Campus

Andrea Conn Eaton joined UCI as chief campus counsel in December. As UCI’s top lawyer, she will head the Office of Campus Counsel and respond to a wide range of legal, regulatory, policy and governance matters at the university. Eaton will also serve as an advisor to the UC general counsel on campus legal issues and systemwide legal policy. Previously, she worked for the California State University system as the assistant vice chancellor & chief counsel for business and finance, as well as the resources attorney on the California Environmental Quality Act, construction and land use. Eaton was also university counsel for CSU, Dominguez Hills.

Magulandia

I t’s a world in which lowriders driven by anthropomorphic dogs cruise the streets of Los Angeles and Aztec gods zip along on skateboards. For two months last fall, visitors to UCI’s University Art Galleries were transported by “Aztlán to Magulandia: The Journey of Chicano Artist Gilbert ‘Magu’ Luján.” The exhibit, featuring the work of the pioneering Chicano artist who earned an M.F.A. at UCI in 1973, was part of the Getty Foundation’s Pacific Standard Time: LA/LA initiative. Luján, who died in 2011 at the age of 70, was one of the founding members of the Chicano art collective known as Los Four. His artwork combines two central concepts: Aztlán, the mythic northern ancestral home of the Aztecs, and Magulandia, the term he coined for his work and the space in which he lived in Santa Monica.

All images © The Estate of Gilbert “Magu” Luján

Advisor on Health Nationwide

Dr. Howard Federoff, vice chancellor for health affairs and CEO of UCI Health, was named chair of the board of directors for the Association of Academic Health Centers in October. He is nationally renowned for his clinical and research work in neurodegenerative disorders such as Alzheimer’s disease and Parkinson’s disease. “His vision and insights will add greatly in helping to lead our organization and inform all academic health centers as they strive to meet the challenges and opportunities of our time,” said Dr. Steven A. Wartman, the association’s president and CEO.

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All images © The Estate of Gilbert “Magu” Luján
Why did some buildings withstand the 7.1 earthquake that struck Central Mexico on Sept. 19 while others fell? Anne Lemnitzer, UCI assistant professor of civil & environmental engineering, traveled there within a week to find out. She was part of a joint geotechnical engineering reconnaissance effort organized by the Universidad Nacional Autónoma de México and the U.S. National Science Foundation-sponsored Geotechnical Extreme Events Reconnaissance Association. She spent three days in Mexico City and three days south of it in the epicenter region around Puebla.

“We investigated failure and success stories,” says Lemnitzer, whose research focus is geotechnical and structural earthquake engineering. The GEER team assessed buildings, landslides, soil settlement, infrastructure damage, slope instabilities, and dam and embankment performance. “This knowledge will help us further develop design guidelines and analysis procedures that we can use in the U.S.,” she says.

The team observed thousands of collapsed dwellings, particularly in areas nearest the epicenter, including the town of Tlayacapan (at right) in the state of Morelos. “This was expected, as many residential structures are built with extremely simplified construction techniques, with no compliance to building codes or design standards,” Lemnitzer notes.

But she came away impressed with how resilient the people in Mexico were: “We saw neighborhoods coming together to help each other and witnessed thousands of volunteers helping to evacuate and clean up rubble around damaged and destroyed buildings.”
Kyrilacos A. Athanasiou has spent his career inventing biomimetic tissues for use in treating damaged knees, hips, shoulders and other joints. Along the way, he has become a leading authority on the process of translating engineering innovations into commercially available medical instruments and devices. He recently joined UCI’s Henry Samueli School of Engineering as a Distinguished Professor of biomedical engineering. A Cyprus native of Greek ancestry, Athanasiou earned a Ph.D. at Columbia University in 1989 and went straight into a faculty position at the University of Texas, where he remained for 10 years. He then moved to Rice University in Houston, where he worked for another decade. His most recent position prior to coming to UCI was chair of the biomedical engineering department at UC Davis. Athanasiou has served as president of the Biomedical Engineering Society and is currently editor-in-chief of Annals of Biomedical Engineering.

He says a major motivating factor in his move to UCI was the institution’s central role in Irvine’s well-established medical technology ecosystem. He plans to help further solidify that standing and build up UCI as the preeminent research environment. I think the conditions are ripe and right for us to create a structure through which we can train some of our fellows in that pathway.

Q: What type of work were you doing in your early career?
With my group at the University of Texas, I was working on inventing biomaterials to make cartilage heal and repair itself. There weren’t a lot of remedies for people suffering with joint ailments in those days. The doctor would give the patient painkillers until the time came for a knee or hip replacement with implants made out of metal or plastic. We viewed the problem of a small defect in cartilage as a purely mechanics issue involving stress concentration, which intensifies in areas in and around tiny defects in joints. That’s how we came up with biodegradable implants that we would use to fill in the cracks, allowing for the return of smooth joint movement.

Q: Were there any real-world applications for this research?
After some success, we began to think about turning our invention into a product. This being the early 1990s, people were not as used to the concept of academics starting companies and commercializing their innovations. It was up to our team to work with university administrators to develop a set of guidelines. Ultimately, we patented the only product in the world at the time for treating small lesions in articular cartilage. I created a company and began licensing the technology to other firms.

Q: Would you say this early work opened new doors for you?
Yes, I saw early on what was doable and what made sense. I launched my first firm with a $250,000 investment, and a year later, we raised $7.5 million. We brought to the market 15 Food & Drug Administration-approved products. I was still conducting research, applying for grants and mentoring students, but I was also working hard on formalizing systems for academe-based biomedical technology translation and commercialization.

Q: You stayed in academia even after forming companies. Why?
I came close to leaving, to be honest. I had the corner office, and it was exciting to be creating all of these successful products, but my heart was and always will be in academics. I love what I do. I love our research. I love teaching graduate and undergraduate students. I can’t ever imagine leaving this field. It’s the thing that really represents me fully. Also, I realized that I’ve never been interested in creating products solely to make money. To me, it’s about the excitement and passion of coming up with solutions to some of the most difficult problems that afflict humans.

Q: What are some of your notable projects here at UCI?
We have a National Institutes of Health grant for articular cartilage work. We also have an NIH grant on regenerating the meniscus, a knee area of frequent injury for many athletes. We are working to create tissue-engineered structures that look and behave like the real biological meniscus. Supported by a third NIH grant, we also are working on the temporomandibular, or jaw, joint — specifically, a structure between the articulating surfaces called the TMJ disc. The most intriguing thing about it is that close to 90 percent of TMJ problems occur in young, premenopausal women. So there’s a huge gender paradox. Our goal is to make fully biological, fully alive, fully mechanically similar structures to repair damage in the human body. We’re trying to replicate all the properties of the true biological native tissue. We use tissue engineering to come up with solutions so that pain is gone and function returns. We’re super excited about this area of research.

Q: What are your plans for the near future?
We are starting an initiative called DELTAi – driving engineering and life-science translational advances at Irvine – to help translate engineering advances to medicine. It combines mechanical, electrical and chemical engineering with materials science, all under the umbrella of biomedical engineering. It brings in the life sciences, such as biology, biochemistry, histology and pathology. And all of them point to the direction of human medicine as well as veterinary medicine. It makes perfect sense to be working on medical devices and instruments here in Irvine because we’re in the capital of this research area in the country. It’s all around us, in an academically excellent and vibrant environment. I think the conditions are ripe and right for us to create a structure through which we can train some of our fellows in that pathway.

“To me, it’s about the excitement and passion of coming up with solutions to some of the most difficult problems that afflict humans.”
Surfboards hang from the ceiling and Ms. Pac-Man lurks around the corner as would-be business moguls come and go: a bearded Saudi Arabian hoping to launch a camel milk empire, a wavy-haired cognitive science professor who converted a Roomba vacuum into a therapeutic robot, and a physicist whose laser X-ray machine could lead to compression-free mammograms. These are just a handful of the concepts percolating in UCI’s innovation pipeline, which has produced hundreds of patents and products over the years, from a molecule that could potentially reverse Alzheimer’s disease to a device that uses belly motion to recharge cellphones. Because the path from laboratory to marketplace can be tricky, the university is stepping up efforts to nurture campus entrepreneurship and increase industry collaboration.

The goal is to spur new companies and jobs in Orange County, attract more creative faculty and students, and – as a side benefit – boost royalties and licensing fees from Anteater research.

UCI Applied Innovation smooths the way for Anteater research to become commercial products and benefit society

By Roy Rivenburg

Leila Safavi-Tehrani, a chemical engineering postdoc, discusses her company Purist, in UCI Applied Innovation’s Cove auditorium. The startup uses miniature nuclear reactors to create circular-fighting radioactive materials.
The central clearinghouse for this activity is a beach-themed outpost known as the Cove, headquarters of UCI Applied Innovation. Brimming with high-tech gear (from virtual reality goggles to 3-D printers), seminars and social events (such as "Monday Night Football" parties with halftime startup pitches), Applied Innovation acts as a matchmaker connecting UCI ingenuity to investors, mentors and corporate partners.

"We’re reinventing university innovation," says Richard Sudek, the organization’s executive director and chief innovation officer. The approach, which kicked off in late 2015, is gaining steam. Nearly 4,000 visitors a month now pass through the hub, and — together with UCI’s more established Beckman Laser Institute and Calit2 incubators — the endeavor has won plaudits from outside observers. "UC Irvine deserves credit for pioneering a system that engages private resources to support faculty, student and alumni entrepreneurs, and does so in a very efficient way," says Sean Randolph, senior director of the Bay Area Council Economic Institute, which recently issued a report on innovation and startup programs at all 10 University of California campuses. UCI’s template, the report says, is "dynamic and sophisticated."

"We’re reinventing university innovation."

Reshaping Orange County’s Economy

Flanked by a B-1 bomber model and a large, illuminated globe in his Newport Beach office, former Rockwell International CEO Don Beall and his son Ken, a real estate entrepreneur, discuss their vision of Orange County as the next great tech mecca, propelled by pioneering research at UCI.

"My dad used to attend a breakfast lecture series in which UCI scientists would explain their latest discoveries," recalls Ken Beall. "He always came back saying, ‘You won’t believe what they’re working on over there.’"

To help transform such breakthroughs into companies, the Bealls have funded various campus programs over the years, such as the business school’s Beall Center for Innovation and Entrepreneurship, which focuses on academics, curricula and hands-on learning.

A few years ago, the duo decided something more comprehensive was needed. UCI officials agreed. Part of the impetus was a changing mindset on college campuses. "Younger faculty and students want to make an impact in the world," says Pramod Khargonekar, vice chancellor for research and distinguished professor of electrical engineering & computer science. Universities that don’t cater to that desire will have trouble attracting top talent, he says.

Another factor was stiffer competition for dwindling government dollars. To justify more funding, "we need to demonstrate that the research done on campus benefits society," says Chancellor Howard Gillman. The Bealls had their eyes on a bigger picture: economic shifts at home and abroad. To keep America competitive, they reasoned, it was critical to revamp and speed up the process for bringing university innovations to life. Among other things, they suggested business advisory panels for each UCI dean to identify and shepherd projects with commercial potential.

"If a professor is developing the next ‘sliced bread’ and gets industry input, he may learn that a slight modification would turn his invention into a billion-dollar company," says Ken Beall. "He might even get private-sector funding at a very early stage."

Such collaborations could also help turn Orange County into another Silicon Valley, replacing the region’s once-dominant aerospace, defense and land development titans with medical device, computer gaming, cybersecurity and other tech firms spawned by UCI research, says Don Beall.

The only missing ingredient is access, his son adds: "The campus is like this up north," he says. "It’s a venue and the vibe. ‘There’s nothing like this up north,’ he says. ‘It’s a cool spectacle of TV screens and gadgetry.’ And then some.

Roam around the 31,000-square-foot Cove or its next-door annex: The Valley of Death

Clutching several plush toys, Jack Miller dashes to the front of the auditorium and demonstrates a talking monkey to a crowd of beer-drinking "Monday Night Football" fans. Halftime product presentations at the Cove are one of Applied Innovation’s signature showcases for startups.

Miller — a lanky mechanical engineer who grew up in Palo Alto, California, and recently moved his company to Orange County — leaves the event impressed by both the venue and the vibe. "There’s nothing like this up north," he says. "It’s a cool spectacle of TV screens and gadgetry.”

And then some.

Entrepreneur Jack Miller demonstrates one of his talking toys, designed to get kids off the couch, during a startup pitch session at the Cove.
and there’s no telling what you’ll encounter: an orange plastic bust of Abraham Lincoln sitting by a 3-D printer, a lunchtime seminar on “How to Create a Killer Brand Name,” a virtual reality tour of the UCI campus, or maybe someone playing “Donkey Kong” near a row of Tiki god bar stools.

But behind the quirky accoutrements is a serious mission: to help UCI inventors avoid “the valley of death,” where brilliant ideas and promising research can falter for want of funding or sage advice.

To counter such obstacles, UCI Applied Innovation offers just about everything a budding entrepreneur needs, from patent attorneys to cash grants, says Sudik, a veteran businessman, angel investor and executive coach who was recruited by the Bealls.

Versafit, an app to help people find exercise partners, was an early beneficiary. Launched two years ago by then-MBA student Julian Clarke and alumnus Alton Chislom, the startup began strongly, winning favorable notices from Inc. magazine and CNBC. Then technical snafus derailed the app, forcing the founders to shut it down.

The pair turned to Applied Innovation for assistance. Guided by program mentors, Versafit retooled its software, changed the target audience to people looking for pickup basketball games and group activities, and devised a new financial model.

“The one-on-one mentorship with the Cove’s experts-in-residence was extremely helpful,” Chislom says. Versafit 2 is expected to debut early this year. It’s just the tip of UCI’s innovation iceberg.

and there’s no telling what you’ll encounter: an orange plastic bust of Abraham Lincoln sitting by a 3-D printer, a lunchtime seminar on “How to Create a Killer Brand Name,” a virtual reality tour of the UCI campus, or maybe someone playing “Donkey Kong” near a row of Tiki god bar stools.

But behind the quirky accoutrements is a serious mission: to help UCI inventors avoid “the valley of death,” where brilliant ideas and promising research can falter for want of funding or sage advice.

To counter such obstacles, UCI Applied Innovation offers just about everything a budding entrepreneur needs, from patent attorneys to cash grants, says Sudik, a veteran businessman, angel investor and executive coach who was recruited by the Bealls.

Versafit, an app to help people find exercise partners, was an early beneficiary. Launched two years ago by then-MBA student Julian Clarke and alumnus Alton Chislom, the startup began strongly, winning favorable notices from Inc. magazine and CNBC. Then technical snafus derailed the app, forcing the founders to shut it down.

The pair turned to Applied Innovation for assistance. Guided by program mentors, Versafit retooled its software, changed the target audience to people looking for pickup basketball games and group activities, and devised a new financial model.

“The one-on-one mentorship with the Cove’s experts-in-residence was extremely helpful,” Chislom says. Versafit 2 is expected to debut early this year. It’s just the tip of UCI’s innovation iceberg.

Younger faculty and students want to make an impact in the world.

The Next Great Invention

In its half-century history, UCI has midwifed scores of groundbreaking ideas, across all departments. The school’s biggest commercial hit—one that has earned more than $55 million for UCI—was inspired by a 1992 baseball game. Dr. J. Stuart Nelson, a surgeon and biomedical engineering professor working at the Beckman Laser Institute & Medical Clinic, had been closing in on a way to obliterate port-wine stain birthmarks with lasers. The sticking point was that using intense light beams to destroy the discolored blood vessels also damaged the skin’s surface. Nelson needed a practical method to cool only the outermost layer of a patient’s skin during laser surgery.

His eureka moment came after watching a foul ball ricochet off a batter’s ankle. A trainer emerged from the dugout and numbed the injury by spraying it with ethyl chloride. A few days later, Nelson and his colleagues jury-rigged a Toyota Camry fuel injector valve they had bought at Pep Boys and zapped themselves with Freon during laser exposure. The experiment led to a patent for “dynamic cooling,” which revolutionized laser skin treatments.

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Dr. J. Stuart Nelson’s dynamic cooling device has earned UCI $55 million in licensing revenue.

source: UCI Applied Innovation

Alumni Julian Clarke, MBA ’16 (left) and Alton Chisolm ’09, MBA ’15 developed an app to help people find pickup basketball games.

Steve Chang / UCI
“Having only nine months to develop our device was a challenge,” says Maaikee Kiyoe Pronda, data analysis officer for Salux Diagnostics’ mostly female team. “There is a definite clinical need for this technology, and it was rewarding to see our device go from a napkin design to prototype development.”

UCI Applied Innovation co-sponsors BioENGINE, which is funded through a state grant and industry donations. Tom Yuen, a 1974 electrical engineering grad who went on to co-found AST Research, a computer conglomerate, wishes such entrepreneurial programs had been around when he was a student. “I started my first business in my garage, and it took me a very long time to get my company off the ground,” says Yuen, now CEO of PrimeGen Biotech. “It would have been great to have had a resource like the Cove to help expedite my ideas and avoid common business pitfalls.”

“Physics & astronomy professor Chris Barty’s technology could revolutionize X-rays, mammograms and nuclear security.”

Medicine is just one application. The original purpose of Barty’s research was to improve security at ports. Unlike current screening technologies, Lumitron machines can see through lead to detect smuggled uranium-235, he says. Other potential benefits include eradicating tumors and even destroying nuclear waste.

More discoveries are likely, Barty says, once Lumitron’s first UCI device comes online, probably in early 2020.

Meanwhile, the university’s entrepreneurial push is seeping into classrooms and faculty reviews. Some departments are starting to look at patents and startup activity as factors in measuring job performance, campus officials say.

On the instructional side, biomedical undergraduates and graduate chemical and biochemical engineering students are now required to participate in a yearlong program called BioENGINE, in which five- and six-member groups design and build medical devices suitable for commercialization. A gadget that diagnoses burn wounds is one of the projects that was spun off into a startup.

Let’s make a mountain out of an anthill.

Anteater pride is strong. We are currently ranked as the #9 public university in the country by U.S. News & World Report. However, we cannot rest on our laurels. Various criteria determine the ranking, but one category we can definitely impact is the alumni giving rate. This Giving Day, your donation can help us raise our ranking even more. So we call on all UCI alumni to keep the momentum going and build our reputation as one of the nation’s premier research universities.

Alumni, student and faculty entrepreneurs can apply to UCI’s Wayfinder incubator at bit.ly/UCIMag_Wayfinder.

When everybody gives, we all gain.

Donate April 25 at givingday.uci.edu
From miniature beating hearts to hacker-resistant cellphones, UCI faculty, students and alumni have generated a multitude of remarkable inventions and discoveries. Some hold the potential to change or even save lives, such as a newly patented cancer treatment. Others herald simpler pleasures, such as smoother skateboarding.

On these pages, we highlight nine examples from UCI’s innovative product parade. They range from an inexpensive gel that could defang deadly snake venom to an experimental fusion reactor that might someday produce bountiful clean electricity.

The latter technology, which requires Hades-like temperatures of 100 million degrees, is overseen at Tri Alpha Energy by Anteater alumnus and company president Michl Binderbauer. “We’re working to create a mini-sun on Earth,” he says, “by smashing light atoms together in a plasma, then harnessing the energy that’s released to eventually power our homes, cars and more.”

Tri Alpha Energy

Angling to create a new source of clean power, Tri Alpha Energy operates an experimental nuclear fusion reactor in a nondescript building on the outskirts of Orange County. Unlike most fusion chambers, Tri Alpha’s uses nonradioactive fuel and relies on high energy particle beams to control the fiery plasma. The “friendly fusion” technology grew out of concepts developed with the late Norman Rostoker, a UCI physicist who co-founded Tri Alpha. If successful on a larger scale, it could produce virtually limitless and pollution-free energy. Toshiki Tajima (left), UCI’s Norman Rostoker Chair in Applied Physics, serves as Tri Alpha’s chief science officer. Michl Binderbauer, Ph.D. ’96 (right) is president and chief technology officer.
**DTI Holdings**

*Low-cost snakebite remedy*

A molecular gel that slithers through the bloodstream to neutralize snake venom — and may also be able to treat scorpion and spider bites — has emerged from the lab of UCI chemistry professor Ken Shea and Ph.D. student Jeffrey O’Brien. Priced at a fraction of the cost of traditional antidotes, the invention appears effective against multiple snake species and needs no refrigeration. Worldwide, snakebites kill more than 100,000 people a year and cripple millions more. The product has been licensed to startup DTI Holdings and is undergoing in vivo testing.

**BottleRocket**

*‘The Uber of recycling’*

Instead of hauling cans and bottles to recycling centers for money, BottleRocket customers send a text to the company and everything they’ve collected gets picked up at their doorstep. And for each bin turned in, clients can choose a reward of $5 in cash, gift cards or donations to charity. Founded in a UCI dorm room by political science and economics major Arthur Avetisov ’15 and international studies student Brian Leung ’16 (below, far left), the company operates under the motto “You recycle. We pay. Earth wins.” The service, which is rolling out gradually across Orange County, has been dubbed “the Uber of recycling.”

**Immersive Entertainment**

*Virtual reality voyages*

Put on a headset and kayak through the Grand Canyon from the comfort of your own living room. Immersive Entertainment’s virtual reality ride floats past towering rock formations, interactive fish, blinking fireflies (in the product’s moonlight mode) and cascading waterfalls, leaving a number of YouTube reviewers spinning their heads in amazement. The company’s CEO and co-founder is Ciaran Foley (above), a startup veteran who graduated from UCI in 1996 with an information & computer science degree. Next up: a platform that will enable anyone to create a VR experience.
Waterborne Skateboards

Like surfing on cement

When bolted to the front wheels of any skateboard, Waterborne’s adapter is designed to create the sensation of surfing on land. Inventor Patrick Dumas (below), a UCI business information management major, developed the prototype after experimenting with couch springs, shopping cart casters, scrap metal and various other “Frankenstein” parts. The product can be seen in action via numerous YouTube videos.

jCyte

Saving diseased eyes

After decades of laboratory work, Drs. Henry Klassen and Jing Yang created retinal stem cells that can be injected into diseased eyes to halt and possibly reverse retinitis pigmentosa, an inherited condition that eventually leads to blindness. The therapy has been tested on animals and is now undergoing human trials at the Gavin Herbert Eye Institute on campus and at other facilities. Klassen and Yang, who teach in UCI’s ophthalmology department, co-founded jCyte.

Novoheart

Miniature human hearts in a jar

Based on UCI research, Novoheart converts human blood cells into cardiac tissue strips that are slowly formed into miniature beating organs. The tiny tickers can then be used to test new medications for cardiac safety before human trials. Novoheart was co-founded by UCI biomedical engineer Michelle Khine (right), who spent a decade collaborating on the technology with Ronald Li, a former professor at UC Davis and Johns Hopkins University who is now the company’s CEO. Inventions developed in Khine’s lab were licensed to Novoheart, which recently opened an office in the Cove at UCI and was listed on the Toronto Stock Exchange.
Homecoming Weekend is a UCI tradition that offers a variety of activities and special events, from Homecoming and Reunions to Anteater Family Weekend for parents—there’s something for everyone. Cheer on the Anteater men’s basketball team at the Homecoming game, experience student performances and expand your knowledge with distinguished faculty.

For more information, visit engage.alumni.uci.edu/homecoming18

Reunions & Chapter Events
Friday & Saturday:
Enjoy various alumni chapter events and reunions celebrating the classes of ’68, ’78, ’93, ’08 and ’13.

Anteater Family Weekend
Friday & Saturday:
All UCI parents and family members are invited to enjoy two days of exciting programming and activities.

Alumni
Welcome Home Anteaters

In Good Company
Some alumni startups are born and nurtured on campus. But several intriguing Anteater-affiliated businesses were launched after graduation:

• Deep Space Industries, which hopes to mine asteroids with rockship robots, was co-founded by Jim Luebke ’99, an aerospace engineering and history major.
• Ono Kayak, co-founded by social sciences alumnus Andy Siddharth ’04, makes foldable kayaks.
• Hollowtop Technologies, a startup specializing in “smart” blast windows that help control indoor temperatures, was co-founded by chemical engineering alumnus Jason Holt ’97.
• JustFoodForDogs, which makes upscale canine meals, employs veterinarian Oscar Chavez, FEMBA ‘12 as its chief medical officer.
• Tea Drops, a company that sells bagless tea made from pressed leaves that dissolve in your cup, was founded by Sashee Chandran ’07, an economics major.
• Fontainebleau Miami Beach, South Florida’s landmark hotel, opened in 1954, but its 2005 remodel was spearheaded by CEO Glenn Schaeffer ’74, M.A. ’75, English.

Hiperwall
Video on steroids
Moscow’s subway system, Las Vegas’ Blue Man Group and Santa Ana’s police department are among the clients of Hiperwall, a UCI-hatched software system that makes multiple TV screens behave like one giant display. The jumbo video wall technology was invented by Stephen Jenks, formerly an assistant professor of electrical engineering & computer science at UCI, and alumnus Sung-Jin Kim. Hiperwall has also been used by foreign intelligence agencies, Applied Innovation’s Cove auditorium and a Belgium airport, where incoming international passengers can wave at infrared images of themselves on a 48-foot-long video display. While visually entertaining, the system serves a more practical purpose as well: Its heat-sensing cameras help officials detect passengers with fevers so they can be pulled aside for possible quarantine.

Immunant
Hacker attackers
With funding from military agencies and the National Science Foundation, Irvine-based Immunant develops software tools to protect cellphones, computers and other devices from hackers. Launched by a trio of UCI computer science researchers—Stephen Crane, Ph.D. ’15 (below), Andre Homicz, Ph.D. ’15 and postdoc Per Larsen—the company creates randomized, moving-target security systems that make it harder to break into computer hosts. Michael Franz, Chancellor’s Professor of computer science, also has a stake in the firm, which primarily serves software makers.

UCI Magalu 28

UCI Homecoming Weekend • March 2-3, 2018

Welcome Home Anteaters

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UCI
From aspiring philanthropists to future captains of industry, students navigate new economy, launch startups with help from UCI’s ANTrepreneur Center

By Rosemary McClure     Photos by Steve Zylius

Bill Gates and Mark Zuckerberg are living proof that you don’t have to wait until after college graduation to launch a business. So are Olaoluwa Adesanya, Zachary Little and Crystal Sanchez, who are among hundreds of UCI students who have founded campus-based businesses in the three years since UCI’s ANTrepreneur Center opened its doors.

“We want to help you develop whatever kind of company you want to build,” Executive Director David Ochi tells Anteaters. “Entrepreneurship is just a means of allowing you to live the kind of life you want to live and have the impact you want to have.”

The center, in collaboration with UCI Applied Innovation, focuses on turning student ideas, research discoveries and technological breakthroughs into successful businesses that can count on UCI for support.

“It’s a crucial goal, given today’s economy, since students no longer can depend on finding full-time employment directly after graduation. Your odds of being self-employed at some point within five years of graduating from college are almost 50-50,” Ochi says.

The numbers fluctuate depending on major. A recent study by Vanderbilt University showed that 6 in 10 arts grads, for example, were self-employed after graduation. “If you’re a trombonist or a dancer or an artist, it’s virtually guaranteed that you’re going to be a contract employee at best,” he says. “You could play for the New York Philharmonic, but you’re still going to be a contract employee.”

Ochi calls it “the age of the 1099” – referring to the IRS form used to report self-employment earnings. “The world of the W-2 is diminishing,” he says. “The contract employee is becoming the norm. You need to be able to market yourself as a contractor and understand basic things such as invoicing and marketing.”

Enter the ANTrepreneur Center, which helps build those skills. “Schools have realized that we need to teach these things as much as we need to teach students how to write a résumé,” Ochi says.

The center recruits students through social media, classroom outreach, partnerships with campus organizations and booths on campus, where anything from a dancing Snapchat ghost to an inflatable dinosaur costume draw the attention of intrigued passers-by along Ring Mall.
Once engaged, students benefit from the center’s ongoing digital content and more than 200 events per year, including daily lunchtime events, which offer a never-ending supply of learning opportunities for those curious about or working on a startup.

A Risk-Free Place
It’s Talk-O Tuesday at the ANTrepreneur Center, and a dozen students are lounging on chairs and couches talking to each other, laptops nearby. A pile of wrapped tacos is also nearby, but it’s shrinking quickly as the minutes tick by.

The center is located in the Phineas Banning House, a comfortable, high-ceilinged space that once served as the alumni center. It’s in a pastoral area of the campus where pepper trees shade walkways. Roses and purple morning glories grow in planters and climb up lattices. Until recently, the center’s staff was crowded into a 200-square-foot area on the opposite side of campus.

“Until recently, the two paid employees, Ochi and Assistant Director Breanna Hale, and 24 interns and volunteers have 2,200 square feet, making things much more comfortable. The building is also more conducive to educational meetings like the one that’s going on today. Talk-O Tuesday gatherings focus on developing soft skills and learning how to network.”

Senior Olaoluwa Adesanya is showing a prototype of a newly created product to a fellow student. It’s an interactive glove that makes it possible for blind people to learn how to play music on a piano or woodworking instrument.

“We’ve been working on it a long time. I hope it takes off,” says Adesanya, CEO of the UCI startup Air Notes. Has the ANTrepreneur Center offered guidance?

“It’s made a big difference,” he says. “Ever since I found this place, I’ve been connecting with people who can help.”

In addition to myriad networking opportunities, the center offers a risk-free environment to start a business.

“The ANTrepreneur Center provides a safe space for students to explore entrepreneur-ship even if they do not have that winning idea yet,” says Michael Dennin, vice provost for teaching and learning and dean of the Division of Undergraduate Education. “Many of our students are interested in entrepreneurship, though they may not know what it fully means or what they can do in that space.”

And if a student goes on to become an employee instead of an employer, he or she has acquired a valuable mindset and expertise, Dennin adds. “The skills that make a good entrepreneur are applicable to so many other areas of success that we hope all students will develop them.”

Learning Survival Skills
Ten students are taking advantage of a Workshop Wednesday lunch-hour gathering on campus, listening to a speaker and noshing on pizza at the Beall Center for Innovation & Entrepreneurship. The room, located within The Paul Merage School of Business, isn’t large, but it’s a perfect fit for this group, which is paying close attention to Srinivasa Pagidyla.

“For any business, finding the right stewards – people who are accountable and adaptable – is imperative,” says Pagidyla, a long-time entrepreneur and a Harvard Business School alum. Today he’s giving advice from his recent book, Growth Confidential: The Secret SPICE for the Exponential Growth of a Company in the Digital Economy. In addition to discussing how to hire employees, he talks about how to position a company, develop values, price a product and create platforms.

Students ask questions, take notes and then cluster around him when the lecture ends. They’re not here because they have to be, they’re here because they want to learn the survival skills he’s teaching.

“Entrepreneurship is just a means of allowing you to live the kind of life you want to live and have the impact you want to have.”

Student Startups
The ANTrepreneur Center opened its doors in 2014, funded by alumni donors Carol and Eugene Choi of Irvine and a grant from the Blackstone Charitable Foundation. It was modeled after a successful project at the University of Miami that generated hundreds of business proposals and new jobs.

The goal was – and is – to introduce entrepreneurship as a viable career option and provide students, regard-less of major, with a support system and a network of venture coaches.

UCI’s program eventually moved away from Blackstone, piggybacking onto the university’s much larger Applied Innovation institute, housed just off campus on California Avenue.

“If you’re in the community and want to be involved in entrepreneur-ship, Applied Innovation is the place,” Ochi says. “If you’re a student, the ANTrepreneur Center is a great place to start.”
What if you spent 10 hours a week for 10 weeks developing your own business? That’s the challenge Ochi poses to them.

“My first question to them,” he says, “is ‘Do you want to build a business or just work for a fast-food restaurant for minimum wage?’”

How does he motivate students?

“I tell students that entrepreneurship is a once-in-a-lifetime chance to apply your skills,” Ochi says. “Among them:

• Zachary Little, a 20-year-old junior, loves to talk about his startup, Vanguard Products, which sells items such as infrared thermometers, massage balls, hot yoga towels and kitchen scissors on Amazon.com. He has three partners, a team of advisers and remarkable plans for his own future. When Little first came to the ANTrepreneur Center as a freshman, he says, ‘I had lots of grand ideas about what kind of companies I wanted to build,’ but he didn’t know how to carry out those ambitions.

“Now, almost two years later,” Little says, “I am one of the center’s business consultants helping other young entrepreneurs, and my company has consistent daily sales and is producing revenue.” His eventual goal? “To have $5 million in investment accounts generating 5 percent to 8 percent yearly before my 30th birthday,” he says. “This will give me the freedom to create social change in the world.”

• Crystal Sanchez was already on her way to success when she entered UCI as a freshman in 2015. That year, she was named the nation’s top student entrepreneur for her business plan for Guardian Locket, an attractive piece of jewelry she developed that can issue a security signal if the wearer is in danger. Her motivation was a sexual assault on her best friend. “Being with her after it happened made me want to help others avoid it,” Sanchez says. Now a junior, she’s an intern at the ANTrepreneur Center and helps other students. In addition, “I’m making connections and learning to network,” she says. “It opens you up to so many new ideas. It lights a fire in you.”

• Kristen Lin and Alec Kriebel launched their company, Instant-Custom, a year ago, manufacturing and selling personalized goods such as mugs, posters, buttons and cards. The two friends, who received undergraduate degrees in June 2017 and now run their company from the Bay Area, credit the ANTrepreneur Center’s “supportive mentorship and resources for helping us scale the business and gain a wide entrepreneurial network.”

Ochi is a UCI graduate himself—earning bachelor’s degrees in political science and biological sciences in 1997 and an MBA in 1999—and also an entrepreneur. He launched his first enterprise, a tutoring company called A’s Unlimited, at the age of 13. “This job is the first time I’ve worked for someone,” Ochi says. “That took some getting used to.”

But he appreciated the potential. “Launching the center at my alma mater is a once-in-a-lifetime chance to apply my entrepreneur skills for the next generation. It has been the most fulfilling brief of my life.”

How does he motivate students?

“My first question to them,” he says, “is ‘Do you want to earn $12 an hour when you’re in college or work at a fast-food restaurant for minimum wage?’”

Then Ochi poses a challenge.

“What if you spent 10 hours a week for 10 weeks developing your own business? Your goal would be to earn $3,000 in that 10-week period,” he tells them.

Fourteen students took him up on the initial challenge, creating tutoring businesses or finding other low-cost ways to earn money. Twelve hit the target, Ochi says, and the others were close. And they all learned a lot, he notes.

He estimates that more than 5,000 students have utilized the center’s resources. A few receive small grants for things as basic as printing business cards or flyers. But financial assistance is a minor part of the program.

“The center’s ANTrepreneurs are as varied as UCI’s student body. Some want to set up nonprofits for philanthropic reasons; others want to become captains of industry. Still others have modest goals: They understand that finding work is increasingly difficult and want to know how to go it alone.

Among them:

• Zachary Little, a 20-year-old junior, loves to talk about his startup, Vanguard Products, which sells items such as infrared thermometers, massage balls, hot yoga towels and kitchen scissors on Amazon.com. He has three partners, a team of advisers and remarkable plans for his own future. When Little first came to the ANTrepreneur Center as a freshman, he says, ‘I had lots of grand ideas

A Way to Live

More than half the students at UCI either come from families that are low-income or are the first in their families to go to college. The ANTrepreneur Center – with its one-on-one consultations, mentoring, advice and networking opportunities – aims to turn their dreams into reality.

“I tell students that entrepreneurship is a tool, a way to live the life you want to live,” Ochi says. “If you say, ‘I want to help the people of Namibia,’ entrepreneurship is the way. If you say, ‘I want to be the richest guy on earth,’ entrepreneurship is the way. If you’re working for a company, and you’re launching a new division, entrepreneurship is the way to do that too.”

He adds, “Truly, if you want to have global human impact while fostering your community, entrepreneurship is the way.”

You don’t have to be enrolled at UCI to find help at the ANTrepreneur Center, but you do need a connection to the campus. Chad Trainer, a UC Santa Barbara grad, was able to work with the center when he teamed up with Ija Coughcha, a UCI student at the time, and another friend from UC Berkeley to take on the legal services industry with the startup Esqalate.

Trainer says the business focuses on bridging the access-to-justice gap: Esqalate’s solution is a couple of web platforms that will help low-income clients get free or affordable legal help. Eventually, they hope, these platforms will make legal assistance available nationwide.

Says Trainer, “The ANTrepreneur Center provided us with tremendous guidance and connected us with startup opportunities that we otherwise might not have discovered.”
There are times in life when a single moment can change absolutely everything.

It was the middle of the night – 2, maybe 3 a.m. – in February 2006, and Staff Sgt. Aaron Anderson and his team of U.S. Army Special Forces were about to set out from base to capture a member of the Taliban at a location in Afghanistan’s Helmand Province. But when they learned their target was not in place, the mission was postponed. Hours later, the group embarked on a new mission: supporting nearby villagers who were being harassed and threatened for resisting the Taliban regime.

“The Taliban were exploiting the local populace,” Anderson says. “We wanted to go out there, get them help, gather intelligence and set our targets. We needed to figure out the network so we could understand how to strike.”

The men were in good spirits despite their original mission having been called off. In the Humvee, Anderson and his fellow soldiers were chatting and laughing, talking about how each had a connection to California. Thousands of miles away from home in a war zone, it bonded them in a deeper way. One moment, they were teammates out on a routine patrol looking for intel. The next ….

The Explosion

He felt like he was in an isolation tank, suspended in midair, time moving slowly. Dust and debris clouded his vision, and all he could hear was the reverberation of white noise and tinnitus in the aftermath of the explosion, accompanied by the bitter stench of chemicals, fuel, gunpowder and smoke.

A SPECIAL FORCE

Life-altering injuries ended alumnus Aaron Anderson’s military career but awakened his entrepreneurial spirit and desire to help his brothers in arms.

By Anna Iliff
An improvised explosive device – or IED, as they’re more commonly known – had ejected the man from the vehicle, killing the driver and slamming Anderson into its crater along with hot metal and shrapnel that burned the back of his legs. At the time, he didn’t realize the full extent of his injuries. His left leg was broken in several places, both heels were crushed and a pectoral muscle was torn, among other wounds. But Anderson knew he was alive. A man of faith, he thanked God.

“It was at the right age, and I was looking for direction in my life. Everything fell into place. I needed to do it for myself, and I needed to do it for my country,” he says, his voice breaking with conviction.

Operation: Green Beret
Recovered from the explosion was a battle of its own. Anderson underwent 24 surgeries to save his legs and spent several months in the Walter Reed Army Medical Center in Washington, D.C. It was there that he met fellow veterans, many far worse off than himself, trying to cope with limited physical capabilities as well as limited government resources.

“There were guys I was worrying about how they were going to take care of their families, struggling to figure it all out and put their lives back together again,” Anderson says. “That’s stressful. That’s pressuring.”

Once again, he found himself on the front lines, determined to make a difference. Only this time, he was ready to lead the charge.

“Charity organizations would come in, but they didn’t understand me,” he recalls. “They didn’t understand most special operations guys in there.”

So in 2009 Anderson started his own the Green Beret Foundation. The San Antonio, Texas-based nonprofit has transformed lives by helping wounded soldiers pay for ongoing medical treatment, supporting family needs, awarding college scholarships to their descendants and even covering the costs of in vitro fertilization for a veteran and his wife who desperately wanted to start a family but couldn’t due to combat injuries.

“The fact that we got to help create life was, hands down, the best thing that has come out of the Green Beret Foundation,” Anderson says. “When you’re in the military, you see life take all too often. To bring life into the world was incredible.”

Since its inception, the organization has worked with more than 2,500 families. When a Green Beret is injured, the foundation immediately sends a check and a care package to get him through his hospital stay. From there, it determines what type of support he needs – be it financial or military insurance.

“We fill the gaps the government cannot,” Anderson says. “That’s why organizations like ours exist.”

Assembling the Troops
For Anderson, the key to building a successful nonprofit was putting the right people in place – those with a connection to the Green Beret community who understood the type of people they were helping.

As he tells it, Green Berets are more than just tough Army guys, the real-life “Rambo” of the world. Known as “the quiet professionals,” they’re used to getting the job done themselves, managing high stress, operating in secret and keeping a low profile. They’re proud and determined, and they view the world through a different lens.

“Many of those families will not ask for help, but they really need it, and they’re only going to go to somebody they trust within the community,” says veteran and Green Beret Foundation board member Ron Alexander. “They’re exactly the kind of people who don’t want to take a handout.”

“That’s why getting the right team in place – a board of directors made up of veterans of various wars, permanent staff members with Green Beret loved ones, and Special Forces liaison who could personally reach and work with women in need – was so important to the organization’s success.”

The Quiet Professional
Today Anderson leads a seemingly quiet life compared to his military days, which ended as a result of his injuries from the explosion. He’s a husband, a father, an executive MBA student at UCI’s Paul Merage School of Business and a floor trader for PIMCO, an investment management company in Newport Beach. He’s moved on from his nonprofit, leaving the organization in typical Green Beret style: in the capable hands of people devoted to improving their communities.

“Green Berets are all about standing up for people who aren’t able to stand up for themselves,” Anderson says. “We give them the means to protect and defend themselves and enable them to grow.”

After earning a bachelor’s degree in international studies at UCI in 2008, he spent his spare time working with the local veterans community in Orange County and on campus, serving on the PIMCO Veterans steering committee and organizing events in partnership with UCI’s Veteran Services Center to assist student veterans in translating their military skills for use in the civilian workforce.

“The military offers a lot of opportunities to develop administrative and technical skills, so, naturally, our veterans gravitate toward subjects like business, engineering, computer science and law,” says Adell Duron, director of the UCI Veteran Services Center. “Aaron has helped his fellow veterans and local employers realize the unique qualifications veterans bring to the table. He’s always willing to lend a hand.”

Anderson’s current passion project – a computer-aided design software startup – lives in the Beall Center for Innovation & Entrepreneurship at UCI’s Paul Merage School of Business. He and his co-founders, MBA classmates Gokul Kumar Kolandavel and Brenden Monahan, aim to invent a software platform that incorporates augmented reality into the design process so that electrical, mechanical and manufacturing engineers can seamlessly work together in real-time.

Ultimately, we want to make a product that’s going to help people collaborate more effectively.”

“When you’re in the military, you see life taken all too often. To bring life into the world was incredible.”

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Aaron Anderson (top right) shares a meal with fellow U.S. Army Special Forces soldiers and their support team members while serving in Afghanistan in 2006.
Freshman Tahlia Garza wins the opening tipoff against Idaho State in November at the Bren Events Center, a game in which she racked up seven points and a season-high 10 rebounds.
The Gig Economy

By Megan Cole

As a child, I always knew exactly what I wanted to be when I grew up. It changed from year to year – sometimes from day to day – but I always kept a goal in mind. I would be a reporter, or maybe an astronaut. I could be a pianist, a physicist, a gymnast or a novelist. I hadn’t yet considered the logistics of landing these careers; I hadn’t even found it necessary yet to settle on one. I only knew that these were things I would love to do.

Then, when I was in middle school, the Great Recession hit. My generation watched our families struggle with layoffs and furloughs, lose their livelihoods and relinquish the idea of job security. We millennials were too young to know anything other than a rough economy: We saw our families struggle with layoffs and furloughs, lose their livelihoods and relinquish the idea of job security. We millennials were too young to know anything other than a rough economy: We saw our families struggle with layoffs and furloughs, lose their livelihoods and relinquish the idea of job security. We millennials were too young to know anything other than a rough economy: We saw our families struggle with layoffs and furloughs, lose their livelihoods and relinquish the idea of job security. We millennials were too young to know anything other than a rough economy:

Suddenly, my structured idea of a future – going to school, getting a job as a reporter (or astronaut, or novelist), working for decades and happily retiring – evaporated. What did it mean to plan for a career when, in an instant, you might have to switch to something else? When you might have to work multiple jobs at once? How can you know what you want to be when you come of age during a time when stable jobs are becoming relics.

A

and your vocation no longer defines you? Since then, millennials have inherited what is now dubbed the “gig economy.” Many of my friends are working two or three part-time jobs to make ends meet, or are supplementing their income with freelance gigs, internships and “side hustles.” The prospect of landing a 9-to-5 job (with benefits) for life is disappearing, and certain careers are transforming altogether.

I’m now majoring in both English and literary journalism, and the vision I once entertained of reporting for a print newspaper or landing a tenure-track position in academia has since given way to modern realities. The workplaces of old are suddenly unrecognizable, and nobody knows quite yet what will replace them. It’s hard to plan for a future that doesn’t look like anything we’ve ever seen before.

But this paradigm shift has an upside – a liberating, hopeful one. Unlike our parents and grandparents, millennials aren’t tied to a single, traditional career, and the impossibility of predicting what skills will be “useful” in the future means that young people are becoming immensely adaptable – free to learn deeply and widely, developing themselves for themselves, not necessarily for a specific employer.

At UCI, I’ve had the chance to explore all of my interests and develop some new ones. I’ve written hundreds of stories and articles, pored over Russian novels, studied astronomy and medicine, and hosted a radio show. I’ve even used breaks in spring and summer to travel to New York and the Middle East, attending journalism conferences or pursuing research. And I did all this out of real curiosity and a willingness to learn.

The uncertain economy I’ve grown up with has taught me that it’s wiser to float on an idealized career that, by the time you’re qualified for it, may no longer exist. Thus, modern education should do more than train millennials for a specific job. It should make us more compassionate, complex and critical-thinking individuals able to thrive in any environment.

Universities like UCI – those that encourage learning broadly, crossing disciplines and benefiting the community – are the only sure things in this transitory time. As 19th-century theologian John Henry Newman wrote in The Idea of a University: “If then a practical end must be assigned to education, I say it is that of training good members of society … [giving people] a clear, conscious view of their own opinions and judgments, a truth in developing them, an eloquence in expressing them, and a force in urging them.” More than 150 years later, this still holds true.

As I continue my final year at UCI, I’ve come to terms with not knowing where exactly life will take me. However, I have faith in my education, and I hope to spend my days pursuing my curiosities, no matter what my career path should be. It’s a turbulent time we’re living in, and the loss of traditional structure can be jarring, but I find solace in the freedom to learn about the things I love and contribute to the world in my own way. Even if we don’t yet know what it will look like, the future will come. I trust my generation to make it a good one.

Cole is editor in chief of New University, UCI’s student newspaper.
A California Art Trove

An exquisite, long-hidden collection of California art has been given to UCI by the trust of Gerald E. Buck, a Newport Beach developer. Buck, who built sprawling suburban communities from Southern California farmland, meticulously amassed more than 3,200 original works before his death in 2013 but never displayed them publicly, other than occasionally lending pieces to museums.

Currently stored in a secured Los Angeles facility and in what was Buck’s private exhibition space, the collection will eventually be put on view in a new building on campus to be called the UCI Museum and Institute for California Art.

According to dealers and curators, Buck assembled the most comprehensive private collection of California modern art in the world, representing a who’s who of artists from a century ago to contemporary powerhouses such as Richard Diebenkorn, David Park, Joan Brown and Sam Francis.

Buck’s daughter, Christina, says her father wanted his collection to go to an institution with extensive research programs in the arts and where the public and scholars alike could enjoy and study the pieces. “It makes me so happy,” she says, “that the campus has the works for students, faculty and, ultimately, people who just love art—like my father did.”

Stephen Barker, dean of UCI’s Claire Trevor School of the Arts, stands among a selection of works from the Buck Collection donated to UCI. Clockwise from center:

Maguffin, by Eric Johnson (c. 1995-2009)
Composite resin and wood, 34 x 34 x 60 inches

Standing Figure with Rib, by Stephen De Staebler (1978)
Fired clay, 79 x 17 x 28 inches

Woman with Missing Hip, by Stephen De Staebler (1978)
Fired clay, 81 x 18 x 30 inches

Thrasher, by Peter Alexander (1992)
Oil on canvas, 48 x 84 inches

Couple in Bathroom, aka Study in Red and Blue, by Roger Kuntz (1964)
Oil on canvas, 50 x 39¾ inches

Under One Flag and Two Parasols, by Roland Petersen (1967)
Oil on canvas, 79¾ x 56 inches
That ANTrepreneurial Spirit

UCI Alums Help the Next Generation Follow Their Dreams

By Rosemary McClure

Carol and Eugene Choi are the ultimate UCI couple. They met as undergrads at a campus club, went on their first date at the old Bob’s Big Boy restaurant — once a happening place in Campus Plaza — got married three years after graduation and went on to become successful entrepreneurs.

Now, 30 years later, the couple live five minutes from campus, manage their own international consumer merchandising firm and find time to help current UCI students become entrepreneurs too.

One of their favorite philanthropies is the university’s ANTrepreneur Center, which they have supported financially since its launch in 2014.

Designed to help students turn their dreams of starting a business into reality, the center provides education and fosters networking. Its long-range goal is to promote student and faculty ideas, research discoveries and technological breakthroughs.

The ANTrepreneur Center is “an awesome opportunity for students,” says Carol Choi, who earned bachelor’s degrees in biology and psychology in 1985. “Everyone at UCI comes from a different background,” she says. “Many are first-generation Americans whose families don’t have business experience here.”

But students who utilize the center, she says, “learn the direction they want to go after graduation.... They can take the things they learn back to their communities. Maybe they’ll be able to help make the family business more successful. Maybe they’ll go on to found their own business.”

Carol and Eugene Choi know just how tough that is. After graduating from UCI, Carol Choi earned her master’s degree in business administration and public health from USC in 1987, and then began working in hospital administration. But she hated the long hours.

“I’d get off work every night at 10 and then was on standby,” she recalls. “We’d just married, and my life wasn’t in balance. So I left in ’93 and started a sales and marketing organization specializing in consumer packaged goods.”

That wasn’t easy either: She spent her time working alone in a small office making cold calls promoting toothpaste to retailers and grocers.

Meanwhile, Eugene Choi, who had received a bachelor’s degree in electrical engineering from UCI in 1986, got an advanced computer engineering degree at USC and worked for several high-tech Fortune 500 businesses. In essence, he was supporting them while Carol Choi tried to grow her company.

He was also learning a lot about business ventures along the way. In 2001, he earned an Executive MBA at UCI and joined his wife’s firm.

“When I finished school, I decided to take a chance on making a career move,” he says. “I started my second career in startup mode.”

It was risky.

“We gambled everything,” Eugene Choi remembers. “We took out multiple credit cards, racked my 401K and savings from work, and raised more than $100,000. Our daughter, Sarah, was 2 at the time, and we didn’t want to ask our parents for money. We wanted to do it ourselves.”

The skills he’d picked up at the larger organizations he’d worked for helped him develop the infrastructure of their company, United Exchange Corp., which distributes healthcare and personal care products.

As president and CEO, he grew UEC from a startup to a midsized business within 10 years, establishing teams in sales, marketing, operations, accounting, purchasing, information technology, customer service and warehousing while expanding the customer base to national retail companies such as Walmart, Target, CVS, Walgreens and Dollar General. UEC, headquartered in Cypress, California, now has distribution centers in the Inland Empire and Mississippi totaling 100,000 square feet plus an office in South Korea.

And they’re still together, Eugene Choi says, laughing. Their daughter is currently a third-year law student at UCI, and their son, Aaron, is a sophomore at St. Edward’s University in Texas.

The couple, both of whom were recently appointed as two of 10 new UCI Foundation trustees, believe they should share their good fortune with others.

“We always wanted to be able to give back to our community,” Carol Choi says. “We both immigrated with our parents and received a really good education here. We’ve been blessed and are very grateful.”

When they heard about plans for the ANTrepreneur Center, it seemed like a perfect match.

“There was momentum,” Carol Choi says of the center’s launch. “It wasn’t going to be a class where students would be judged by a grade. It would be a safe place where every idea would be considered a great idea. Students would have mentors, and it wouldn’t matter if you were a history major or an arts major. Everyone would collaborate.”

“Everyone at UCI comes from a different background. Many are first-generation Americans whose families don’t have business experience here.”

More than three years later, that’s exactly how the ANTrepreneur Center works. And the Chois have been major contributors to its success.

“They’ve been philanthropic anchors and also have provided the wisdom to help us launch and continue to navigate the ANTrepreneur Center,” says David Ochi, its executive director. “Without their vision and support, our services would not be available to the entire campus community of students, faculty, staff and alumni. The Chois embody the Anteater spirit of always giving back and paying it forward.”

The Chois are happy they’ve been able to encourage the next generation of entrepreneurs.

“There’s nothing like this country,” Eugene Choi says. “If you have a work ethic, grit and determination to succeed, this country will give you the opportunity.”
Dr. Roderick Seamster Jr., biological sciences

At an Apache Indian reservation nearly three decades ago, Rodney Seamster served as a combination physician, pharmacist, X-ray technician and emergency room surgeon. The doc-of-all-trades assignment, he says, laid the groundwork for his current job as president and CEO of Watts Healthcare, a nonprofit group of community clinics offering everything from pediatriy to ophthalmology.

Kirsten (Cee) Maeda '89, economics

Deidre (Cee) Baptista '90, social ecology

Known as “The Cee twins for lupus,” identical siblings Kirsten Maeda and Deidre Baptista have spent the last two decades spreading awareness of the autoimmune disease, which struck Deidre in 1996. (She’s currently in remission.) Sporting handmade brocade butterflies — inspired by the shape of a common lupus rash as well as their Chinese heritage — the San Francisco-born sister speak at conferences, attend fundraisers and lobby government officials about the malady, which disproportionately affects women and people of color. The lookalike factor helps draw attention to the twins’ message, he says. It also causes double takes and amusing moments in their personal lives. “When our children were little, they got us mixed up and often called us both ‘Auntie Mommy,’” Baptista recalls. One surefire way to tell the women apart: Baptista is right-handed, and Maeda is a lefty.

Melanie Henderson '10, business economics, MBA '17

A one-eyed horse named Pirate is Melanie Henderson’s favorite four-footed friend. She rides him at amateur equestrian events and last spring was ranked No. 1 in the nation for her age group and skill level. It’s a pastime that the Roseville, California native latched onto in elementary school. After jobs cleaning stalls, breaking in horses and teaching riding to others, she came to UCI, where she co-founded an equestrian team while studying business as an undergrad. When not saddled up, Henderson works at the Irvine headquarters of Taco Bell, analyzing the financial health of franchises. She also has the travel bug. Over the last two years, she’s logged trips to four continents.
Field of Greens

UCI students, including third-year education sciences major Suryanshi Pandya, pick green beans at a local farm for the Second Harvest Food Bank of Orange County as part of National Hunger & Homelessness Awareness Week in November.
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